

# Drug Overdose Deaths

## MINNESOTA DEATH CERTIFICATE INFORMATION

### Description

Drug overdose death data come from Minnesota death certificates. After a death occurs, a death investigation is completed, along with an autopsy (94% of drug overdose deaths had an autopsy completed in 2016), and a medical examiner or coroner makes a determination of the cause and manner of death. The cause of death information is then typed into the corresponding sections of the death certificate. Once the medical examiner certifies and completes a death certificate, the information is then sent to the Office of Vital Records (OVR) at the Minnesota Department of Health (MDH). Data quality checks are completed to ensure the death certificate was completed properly and accurately. It is then sent to the National Center for Health Statistics (NCHS) where the literal text on the death certificate in the cause of death fields is converted from text to the International Classification of Diseases and Related Health Problems, 10th revision (ICD-10) codes. The NCHS uses a specially made computer program to code the literal text on the death certificate into ICD-10 codes according to the information listed on the death certificate. This program allows for one underlying cause of death and up to 20 contributing causes of death. Once this program is run and the data are assigned ICD-10 codes, the data are returned to the OVR in the MDH and made available for analysis.

### Strengths

The strengths of death certificate data include the completeness of reporting from across the state, as well as from other states when Minnesota residents die in another state. There is also consistency of reporting across and between states ensuring the data can be easily analyzed. Additionally, data can be easily grouped by the larger drug categories to allow for examination of trends in specific drug categories.

### Limitations

The limitations of the death certificate data include timeliness in completing the death certificates. The death investigation and autopsy process takes considerable time and toxicology testing may take further time to properly identify the drugs involved in the death. Due to Minnesota's current medical examiner and coroner system, there is also variability in how drug overdose deaths are reported. This includes variation in the details and specificity listed on a death certificate in terms of the specific drugs involved in a death. For example, death certificates that only list mixed drug toxicity as a cause of death do not provide the level of detailed information required to properly code the death with ICD-10 codes. Without the correct ICD-10 code the drug overdose death will likely be grouped with "other drugs" (13.8% of drug overdose deaths with T50.9, other and unspecified drugs, as only T-code listed on death certificate). This lack of specificity does not allow for a proper examination of deaths. Finally, death certificates cannot be used to quickly identify new drug trends because of the time it takes to complete toxicology and for death certificates to be finalized and made available for analysis.